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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,168	02/22/2006	Alexandros Tourapis	PU030257	1709

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EXAMINER	
BAYARD, EMMANUEL	

ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/569,168	TOURAPIS ET AL.	
	Examiner	Art Unit	
	Emmanuel Bayard	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *41-50* is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

Claims 1-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1, 12 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **inter coding** method including steps of selecting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "selecting" to limit the steps to the electronic form of the" inter coding," and the claim language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.**

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[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Claim 19 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[3] and recent Federal Circuit decisions[4] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **inter coding** method including step of removing is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "removing" to limit the steps to the electronic form of the" inter coding," and the claim language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.**

Claim 27 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[5] and recent Federal Circuit

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[3] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[4] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

[5] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

decisions[6] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **inter coding** method including steps of reordering is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "reordering" to limit the steps to the electronic form of the" inter coding," and the claim language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.**

Claim 28 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[7] and recent Federal Circuit decisions[8] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the

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[6] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

[7] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[8] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **inter coding** method including steps of selecting and removing is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "selecting" "removing" to limit the steps to the electronic form of the" inter coding," and the claim language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.**

Claim 33 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[9] and recent Federal Circuit decisions[10] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **encoding** method including steps of inter coding, or

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[9] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[10] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

selecting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "inter coding" or "selecting" to limit the steps to the electronic form of the" encoding," and the claim language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.**

Claim 37 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[11] and recent Federal Circuit decisions[12] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example the **inter coding** method including steps of performing, selecting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. **The Applicant has provided no explicit and deliberate definitions of "performing" or "selecting" to limit the steps to the electronic form of the" inter coding," and the claim**

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[11] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[12] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

language itself is sufficiently broad to read on about §101, mentally stepping through the §101 analysis, recalling *In re Bilski,* and telling the person who had the question his or her opinion.

Claims 2-11, 13-18, 20-26, 29-32 and 34-40 are also rejected because they depend on a base rejected claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadono et al U.S. Pub No 20020034249 A1.

As per claims 1, 12 Kadono teaches a method of inter coding a pixel region of a current picture in a video sequence of pictures, the sequence including a plurality of references listed in at 5 least one reference list, the method comprising: the step of Selecting the first reference (see paragraph [0019-0020 [0024] [0092-0093] listed in a reference list to be used as the only reference to be used to encode the pixel region of the current picture (see paragraph [0025] [0036] [0040] [0094).

As per claim 2, Kadono inherently teaches, further comprising the step of setting num_ref idx_lN_active_minusl equal to zero, wherein N represents the number of the reference list.

As per claim 3, Kadono inherently teaches, wherein the first listed reference is closest in time to the current picture containing the pixel region to be encoded (see paragraph [0024] [0129]).

As per claim 4, Kadono inherently teaches, wherein the pixel region to be encoded includes the entire current picture.

As per claim 5, Kadono inherently teaches, wherein the pixel region to be encoded, consists essentially Of the pixels of a video object.

As per claim 6, Kadono inherently teaches, wherein the pixel region to be encoded consists essentially of the pixels of a slice.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadono et al U.S. Pub No 20020034249 A1 in view of Yin U.S. 20060165175 A1.

As per claim 7, Kadono teaches all features of the claimed invention except, wherein the step of selecting the first listed reference comprises a substep of computing

the sum of absolute pixel differences between corresponding pixels of the current picture and of first listed reference.

Yin teaches wherein the step of selecting the first listed reference comprises a substep of computing the sum of absolute pixel differences between corresponding pixels of the current picture and of first listed reference (see paragraph [0019]).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Yin into Kadono as to test every displacement within a pre-determined range of offsets relative to the motion block position as taught by Yin (see paragraph [0019]).

As per claim 8, Kadono and Yin in combination would teach, further comprising the step of comparing the computed sum of absolute pixel differences to a first threshold TI as to test every displacement within a pre-determined range of offsets relative to the motion block position as taught by Yin (see paragraph [0019]).

As per claim 9, Kadono and Yin in combination would teach, wherein if the sum of absolute pixel differences is less than a first threshold T1 then a single reference listed in the reference list is used for encoding the pixel region of the current picture as to test every displacement within a pre-determined range of offsets relative to the motion block position as taught by Yin (see paragraph [0019]).

As per claim 10, Kadono and Yin in combination would teach wherein if the sum of absolute pixel differences is not less than a first threshold T1 then a plurality of references listed in the reference list are used for encoding the pixel region of the

current picture as to test every displacement within a pre-determined range of offsets relative to the motion block position as taught by Yin (see paragraph [0019]).

Allowable Subject Matter

6. Claims 41-50 are allowed over the prior arts of record.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Kondo et al U.S. Pub No 20080063075 A1.

9. Kadono et al U.S. Pub No 20100074335 A1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/8/2010

Emmanuel Bayard
Primary Examiner
Art Unit 2611

/Emmanuel Bayard/
Primary Examiner, Art Unit 2611